

Indianapolis Water 2009 Treated Drinking Water Data



| Substances we detected | MCLG What's the goal | MCL What's allowed | System Wide Results - Levels found in your drinking water | Compliance Achieved | Possible Source Where did it come from? |
|------------------------|-------------------------|-----------------------|--|------------------------|---|
| Inorganic | | | | | |
| Antimony (ppb) | 6 ppb | 6 ppb | ND | YES | Discharge from refineries, fire retardants, ceramics, electronic, solders |
| Arsenic (ppb) | 0 ppb | 10 ppb | ND | YES | Natural deposits |
| Barium (ppb) | 2 ppm | 2 ppm | 0.12 ppm (0.036- 0.41 ppm) | YES | Natural deposits |
| Chromium (ppb) | 100 ppb | 100 ppb | 2.0 ppm (ND - 16.0 ppb) | YES | Natural deposits |
| Cyanide (ppb) | 200 ppb | 200 ppb | ND | YES | Discharge from steel/metal/plastic and fertilizer factories |
| Flouride (ppm) | 2 ppm | 2 ppm | 0.88 ppm (0.23 - 1.5 ppm) | YES | Natural deposits & treatment additive |
| Nitrate (ppm) | 10 ppm | 10 ppm | 1.2 ppm (ND- 3.1 ppm) | YES | Fertilizer, septic leachate |

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|---------------|---------|---------|-------------------------|-----|--------------------------------|
| Copper & Lead | MCLG | AL | | | |
| Copper (ppm) | 1.3 ppm | 1.3 ppm | 0.09 ppm (0 of 58 > AL) | YES | Corrosion of customer plumbing |
| Lead (ppb) | 0 ppb | 15 ppb | 10 ppb (3 of 58 > AL) | YES | Corrosion of customer plumbing |

Lead note: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than other homes in your community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Also flush your tap water for 30 seconds to two minutes before using tap water. Additional information is available from the US EPA Safe Drinking Water Hotline at 800-426-4791 or www.epa.gov.

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|---|-------|--------|---|-----|--------------------------------------|
| Organic Disinfection By-products | | | | | |
| Total THMs (ppb) (THMs: bromo form, bromodichloromethane, chlorodibromomethane, chloroform) | 0 ppb | 80 ppb | 47 ppb (5.1 to 88 ppb) Flow weighted Annual average | YES | By-product of chlorination treatment |
| HAA5 (ppb) (HAA5: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, trichloroacetic acid) | 0 ppb | 60 ppb | 39 ppb (ND to 71 ppb) Flow weighted Annual average | YES | By-product of chlorination treatment |

| | | | | | |
|------------------------------------|---------|---------|-------------------------------|-----|---|
| Other Regulated Organics | | | | | |
| Alachlor (ppb) | 0 ppb | 2 ppb | 0.88 ppb (ND - 1.4 ppb) | YES | Widely used herbicide, primarily used in Midwest to control annual grasses and broadleaf weeds, on crops such as corn, sorghum, and soybeans. |
| Atrazine (ppb) | 3 ppb | 3 ppb | 0.62 ppb (ND - 2.9 ppb) | YES | Herbicide runoff |
| Dalapon (ppb) | 200 ppb | 200 ppb | ND | YES | Herbicide runoff |
| Di(2-ethylhexyl) phthaltlate (ppb) | 0 ppb | 6 ppb | ND | YES | Sample contacts with plastic |
| 2, 4-D (ppb) | 70 ppb | 70 ppb | ND | YES | Herbicide runoff |
| Simzine (ppb) | 4 ppb | 4 ppb | 0.16 ppb (ND - 0.91) | YES | Herbicide runoff |
| Cis-1.2-Dichloroethylene (ppb) | 70 ppb | 70 ppb | 1.1ppb (ND - 1.6ppb) | YES | Discharge from industrial sources |
| Tetrachloroethylene (ppb) | 0 ppb | 5 ppb | ND | YES | Leaching from PVC pipes; Discharge from factories and dry cleaners |
| Toluene (ppm) | 1 ppm | 1 ppm | 0.0011 ppm (ND - 0.0016 ppm) | YES | Petroleum product |
| Xylene (ppm) (total) | 10 ppm | 10 ppm | 0.0010 ppm (ND - 0.0010 ppm) | YES | Petroleum product |

| | | | | | |
|------------------------|----|---------------|----------------|-----|-------------|
| Turbidity | TT | | | | |
| Turbidity (NTU) | NA | 1 NTU | 0.24 (Maximum) | YES | Soil runoff |
| Turbidity (% below TT) | NA | 95% < 0.3 NTU | 100% | YES | Soil runoff |

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|---------------------------------|---|---|------------------|-----|-----------------------------|
| Radionuclides | | | | | |
| Radium -228 (pCi/L) (2003 data) | 0 | 5 | 0.86 (ND - 1.4)% | YES | Erosion of natural deposits |

| | | | | | |
|--|------|-------|-------------------------|-----|-----------------------------------|
| Disinfectant Residual | MRDL | | | | |
| Chlorine (ppm) (Total chlorine includes free chlorine and chloramine) | NA | 4 ppm | 1.4ppm (0.04 - 2.3 ppm) | YES | Disinfection & treatment additive |

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|--|----|----|-----------------------------|-----|---|
| Other Parameters (includes unregulated Contaminate Monitoring) Unregulated contaminants are these that don't yet have a drinking water standard set by the USEPA. The purpose of monitoring for these contaminants is to help EPA decide, based on data collected, whether the contaminants should have a regulatory standard in the future. | | | | | |
| Sodium (ppm) | NA | NA | 39 ppm (12 - 117ppm) | YES | Erosion of natural deposits; leaching |
| pH (standard units) | NA | NA | 7.86 (7.04 - 8.99) | YES | |
| Hardness (ppm) | NA | NA | 323 ppm (146 - 498 ppm) | YES | |
| Iron (ppm) | NA | NA | 0.0041 ppm (ND - 0.066 ppm) | YES | |
| Manganese (ppm) | NA | NA | 0.0030 ppm (ND - 0.040 ppm) | YES | |
| Nickel (ppb) | NA | NA | 1.5 ppb (ND - 2.2 ppb) | YES | Erosion of natural deposits; leaching |
| Sulfate (ppm) | NA | NA | 72 ppm (24 - 194 ppm) | YES | |
| Metolachlor (ppb) | | | 0.10 ppb (ND - 0.10 ppb) | YES | Broad spectrum herbicide, used for general weed control in non-crop areas; widely used on crops such as corn, cotton, peanuts, grass for seed production, nurseries, hedgerows, fencerows, and landscape planting |
| N-Nitrosodumethylamine (NDWA) | | | ND - 0.0045 ppb | YES | (See nitosamines note below) |
| Nitrosamines can form as intermediates and by-products in chemical synthesis and manufacture of rubber, leather, and lastics; can form spontaneously by reaction of precursor amines with nitrosating agents (nitrate and related compounds), or by action of nitrate-reducing bacteria. Foods such as bacon and malt beverages can contain nitrosamines; there is also evidence that they form in the upper GI tract. | | | | | |

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|----------------------------|----|----|--------------------------------|-----|----------------------------------|
| Microorganisms | | | | | |
| E. Coli | 0 | 0 | 0 | YES | Human and animal fecal waste |
| Total Coliform | 0 | 5% | 1.6% highest month system wide | YES | Naturally present in environment |
| Cryptosporidium (org./10L) | NA | NA | 0 | YES | |
| Giardia (org/ 10L) | NA | NA | 0 | YES | |

| | | | | | |
|-----------------------------|----|----|------------------------|-----|--------------------------------------|
| Untreated Source Water Data | | | | | |
| Cryptosparidium (org/10L) | NA | NA | *1/0.25/0.33/0.75 | YES | *(See special note below) |
| Giardia (org/10L) | NA | NA | *2.4/2.4/0.08/2.8 | YES | *(See special note below) |
| TOC (Untreated water ppm) | NA | NA | 4.2 ppm (2.9 - 6.7ppm) | YES | Naturally present in the environment |

* Untreated source water data (in order) from the following plant intakes: White River / Fall Creek / T.W. Moses / White River North

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|--|---------|---------|-----------------|---------------------|-----------------------------------|
| Test results taken directly from the Carmel area | MCLG | MCL | Range | Achieved Compliance | |
| Chlorine (MRDL) | NA | 4.0 ppm | 0.30 - 2.20 ppm | YES | Disinfection & Treatment Additive |
| Copper (AL) | 1.3 ppm | 1.3 ppm | 0.424 ppm | YES | Corrosion of customer plumbing |
| Lead (AL) | 0 ppb | 15 ppb | < 0.005 ppb | YES | Corrosion of customer plumbing |
| Total Coliform (AL) | 0 | 5% | 0% | YES | Naturally present in environment |

MCLG – Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL – Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MRDL – Maximum Residual Disinfectant Level: The highest level of the disinfectant allowed in drinking water. There is convincing evidence that the addition of disinfectant is necessary for control of microbial contaminants.

NTU – Nephelometric Turbidity Units: Unit to measure turbidity.

AL- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

TT – Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

ppm: Parts per million

ppb: Parts per billion

org/10L: Organisms per 10 liters.

TOC: Total organic carbon.

Turbidity: The measure of the cloudiness of water. IW monitors turbidity as it is a good indicator of the effectiveness of the filtration system.

*Untreated source water data (in order) from the following plant intakes: White River / Fall Creek / T.W. Moses / White River North.

What does this chart mean? The chart gives you a quick look at some of the substances that the EPA requires us to test for. You'll notice that the contaminant is listed to the left, followed by the maximum amount allowed by regulations and then the amount that we found in our water. The tests are done on treated, or "finished," water.

What’s being done to improve water quality?

Wellhead protection – In order to minimize the risk of ground water contamination, Indianapolis Water, in accordance with the State Wellhead Protection Rule and local ordinances, has implemented a Wellhead Protection Program. This program involves working with local planning teams and regulators, mapping of the wellhead protection areas, identifying potential sources of ground water contamination, working with businesses to prevent spills and releases of chemicals, and preparing a contingency plan in case of contamination. IW received the Guardian Award from IDEM in 2008 for outstanding educational efforts regarding wellhead protection.

Source Water Assessments – An inventory of identified potential sources of contamination upstream of each surface water treatment facility has been conducted by the United States Geological Survey for the Indiana Department of Environmental Management. These assessments are a helpful component in IW’s overall source water protection strategy. For more information, call IW at (317) 631-1431.

How is the water treated?

Ground water treatment plants aerate and filter water to remove dissolved iron and manganese. Chlorine is added to destroy any bacteria present and to maintain a level of disinfectant as the water travels through the distribution system. Fluoride is added to help strengthen resistance to cavities in teeth. A small amount of ammonia is used to minimize byproducts of the disinfection process and to allow chlorine to persist longer in the distribution system. For a few weeks each year, when the water temperature is cool, no ammonia is added in order to help maintain good water quality in the distribution system. This chlorine residual without ammonia, known as “free chlorine”, is a more active form of chlorine. The “free chlorine” has a more noticeable bleach or chlorine smell with the same level of chlorine.

What if I have special health considerations?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA and Centers for Disease Control (CDC) offer guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants, and offer other health and contaminant information on the EPA's Safe Drinking Water Hotline at (800) 426-4791 or www.EPA.gov.

Is there lead in my drinking water?

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated lead levels in your home’s water, you may wish to have your water tested. Also, flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the EPA's Safe Drinking Water Hotline at (800) 426-4791 or www.EPA.gov.

What is Cryptosporidium?

Cryptosporidium is a microscopic organism that lives in the intestines of animals and people. When ingested, this microscopic pathogen may cause a disease called cryptosporidiosis, which has flu-like symptoms. Although there has been no cryptosporidium found in treated finished drinking water, cryptosporidium is found in source water such as White River, Fall Creek, and Eagle Creek Reservoir.

IW utilizes a stringent monitoring program, testing source water and finished drinking water, as well as using online monitors that measure the clarity of the water, which helps determine the likeliness of the microbe’s presence in the drinking water. At the surface water treatment plants, physical removal by coagulation, flocculation, sedimentation and filtration is used to eliminate the pathogen from drinking water.

How hard is my water?

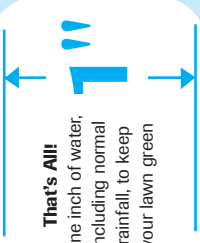
As is common with water in this region, IW water is considered hard due to the natural levels of the minerals calcium and magnesium. The water hardness, expressed as calcium carbonate, typically ranges from around 200 to 350 milligrams per liter or parts per million (ppm). This equates to 12 to 20 grains per gallon (the measure often referred to in determining water softener settings). Water hardness can vary depending on the hardness of the source water that is used to supply different treatment plants. More specific information about the water hardness typical at your address can be obtained by calling (317) 571-2443.



How much to water your lawn?

Did you know that established lawns only need one inch of water a week? Most people water much more than this. Often automatic sprinkler

systems are set to deliver much more water than your lawn needs. It is also difficult to tell how much water your lawn is receiving when you use manual sprinklers.



To determine how much water your grass, lawn or garden needs, follow this helpful tip:

Take an empty tuna or cat food can and place it in an area that is to be sprinkled. Turn on your sprinkler for 15 minutes. Measure the amount of water in the can and you have an idea of how many 15 minute sprinkling segments it will take to reach an inch of water. Take this time minus the rainfall you get during a given week and you have an approximation of how much you need to water. Most people will be surprised at how little water their lawn will need to stay healthy and green.

Where does water come from?

Water supply for its customers comes from several sources:

- White River supplies two of the four surface water treatment plants, White River and White River North. Morse Reservoir, near Noblesville, stores water to assure a dependable supply in White River to these plants.
- Fall Creek is another surface water supply. Geist Reservoir stores water to assure an adequate supply in Fall Creek for the Fall Creek Treatment Plant.
- Also, a number of wells are used intermittently to supplement the supplies to the White River, White River North and Fall Creek plants.
- IW also receives some surface water from Eagle Creek Reservoir which provides water to the T.W. Moses treatment plant.
- IW presently has four ground water stations that serve smaller portions of its service area. These are: Geist Station, Harding Station, South Well Field and Ford Road Plant. These ground water stations treat water pumped from underground water sources called aquifers.



If you are interested in learning more about Carmel Utilities please call the City of Carmel website at www.carmel.in.us or 317-674-1751.

For maintenance concerns or questions about hydrants, taps or mains call the Carmel Utilities facility at 317-733-2855.

Saves Water, Saves Energy!

Did you know?

- Wash clothes in cold water whenever possible. As much as 85 percent of the energy used to heat water goes to heating the water.
- Connect the downspouts directly into the rain barrel and what would otherwise be storm water runoff to water the lawn and garden during dry periods.
- Make sure the barrel and other water saving devices stay out of the street and out of storm sewer drains. These devices can go directly into lakes and rivers, causing pollution. Excessive leaves and other organic material decompose and lower the oxygen available for aquatic life.
- When the lawn, keep it to a minimum height of 2.5 - 3". This will encourage deeper root growth, better absorption of moisture and nutrients, and better stress tolerance during heat and dry conditions. This will allow you to water and fertilize less.
- Plastic water bottles take 700 years to decompose in landfills.
- Encourage materials like gravel and woodchips for walkways and borders. Use permeable materials like gravel and woodchips for walkways and borders.
- 31 percent of the country's energy is used in collecting, treating and distributing water.

What's in my drinking water before it is treated?

The sources of drinking water (including rivers, lakes, streams, ponds, reservoirs, springs and wells) as well as water travels over the surface of the land and through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can contain substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water (rivers, lakes, streams, ponds, reservoirs, springs and wells) include:

- Microbial contaminants, such as bacteria, viruses and parasites, which may come from sewage treatment plants, septic systems, agricultural operations and wildlife.
 - Inorganic chemicals, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas drilling, or farming.
 - Pesticides and herbicides, which may come from a variety of sources, such as agricultural, urban storm water runoff, and residential uses.
 - Organic chemicals, including synthetic and volatile organic chemicals, which are from a variety of sources, including petroleum production, and can be found in urban storm water runoff, and septic systems.
 - Radioactive contaminants, which can be naturally-occurring or the result of oil and gas drilling and mining activities.
- The EPA describes regulations which provide for public water systems. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water which must provide protection for public health.
- Drinking water, including bottled water, may not be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk.



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What is a drinking water report and why did I get one?

As required by the U.S. Environmental Protection Agency (EPA), this drinking water report provides information on where water comes from and how it compares to current standards. If after reading this report you have any questions or concerns, please contact us at (317) 571-2443.

On July 1, 2006, Carmel Utilities acquired all customers owned by Indianapolis Water in the Carmel/Clay Township service area. Carmel Utilities immediately began providing customer service functions such as meter reading, billing, and water distribution system maintenance and repair. However, treatment of your water prior to it reaching your home or business is still being provided by the Indianapolis Water treatment facilities. The data and information in this report was provided to Carmel Utilities from Indianapolis Water.

What's the difference between surface water and ground water?

Surface water comes from rivers, creeks, streams and reservoirs and may potentially have more pollutants and contaminants than ground water. Ground water comes from below the surface, typically from wells drilled deep into the ground. Ground water may have more mineral deposits than surface water.

More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency (EPA)'s Safe Drinking Water Hotline at (800) 426-4791, or via the web at www.EPA.gov.

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City of Carmel Utilities

City of Carmel Utilities

2009 Annual Water Quality Report

Carmel Utilities maintains the highest drinking water standards for the City of Carmel

Carmel Utilities takes its responsibility to provide clean drinking water to its 29,000 customers very seriously. We are pleased to report that your tap water met all Environmental Protection Agency (EPA) and state standards in 2009.

Carmel Resident Parker